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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,310	12/19/2005	Johan Christiaan Halberstadt	NL030722US1	2790
65913	7590	10/31/2007		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER PHAM, EMILY P	
			ART UNIT 2838	PAPER NUMBER
			NOTIFICATION DATE 10/31/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary

Application No.

10/561,310

Applicant(s)

HALBERSTADT, JOHAN
CHRISTIAAN

Examiner

Emily P. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/19/2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/19/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/19/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 12/19/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated; in Specification applicant admits that FIG 1 is a prior art (page 4, line 28). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a) because FIG 1 fails to show detail for box 30 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are

required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "associated inductor" of the "differentiating means" must be shown or the feature(s) canceled from the claim 8. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

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number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). The current abstract of the disclosure is objected to because it has information not directly related to the invention embodiment. An abstract on a separate sheet is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities:

- "...these signals are beneficially employed for measuring the hard switching amplitude and has been previously investigated ... "

(page 7, lines 25-27): there is an error according to English grammar when subject and verb are not matched.

- Capacitor C1 is addressed as C2 (page 5, line 27).
- Specification refer to supply 10 for FIG 5 (page 9, line 33), FIG 5 actually does not show item 10.

Appropriate correction is required.

7. The specification has not been checked to the extent necessary to determine the present of all possible minor errors. The cooperation of applicant is requested in correcting any error of which applicant may become aware of in the specification. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 provides for the use of switch mode circuit in at least one of: switch mode power supplies, motor controllers, battery chargers, ionizing apparatus, high

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tension bias generators, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

10. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "substantially" in claims 5 and 6 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Non-conductive state and conductive state are defined state by common knowledge; it is obscure how those states can be substantial.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. Claims 1-3, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai et al. (U.S. Patent 5,617,306) further in view of Brakus (U.S. Patent 5,631,816).

13. Regarding claims 1-3:

Lai et al. disclose a switch mode power supply circuit including one inductive component (FIG 1, L), switching means (FIG 1, T1/T2), a signal output representative of a voltage at a junction of the at least one inductive component to the switching means (FIG 1, Vp), a signal processing path (FIG 1, Vp to Driver 24), a detector including signal integrating means (FIG 1, items 12, 32, 38), timing means (FIG 1, items 20 and 36).

However Lai et al. do not disclose differentiating means.

Brakus teaches differentiating means (FIG 2, items 17 and 18).

14. Regarding claim 10:

Lai et al. disclose the structure capable of performing method of generating a measure of hard switching amplitude in a switch mode power supply circuit, the circuit including one inductive component (FIG 1, L), switching means (FIG 1, T1/T2), a signal output representative of a voltage at a junction of the at least one inductive component to the switching means (FIG 1, Vp), a signal processing path (FIG 1, Vp to Driver 24), a detector including signal integrating means (FIG 1, items 12, 32, 38), timing means (FIG 1, items 20 and 36).

However Lai et al. do not disclose differentiating means.

Brakus teaches differentiating means (FIG 2, items 17 and 18).

15. Lai et al. and Brakus teach switching converter. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine techniques taught by Lai et al. and Brakus for the purpose of increasing the efficiency of the switching converter (Brakus, column 2, lines 51-58).

16. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lai et al. (U.S. Patent 5,617,306) further in view of Brakus (U.S. Patent 5,631,816) as applied to claim 1 above, and further in view of Rozman (U.S. Patent 6,130,828).

Lai et al. and Brakus disclose the invention except for means to reset at least one of the differentiating means and the integrating means.

Rozman teaches means to reset the integrating means (column 2, lines 4-6).

Lai et al., Brakus, and Rozman disclose voltage converter. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine techniques taught by Lai et al., Brakus, and Rozman for the purpose of increasing the efficiency of the switching converter as Rozman states at column 1, lines 41-44.

17. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai et al. (U.S. Patent 5,617,306) further in view of Brakus (U.S. Patent 5,631,816) as applied to claim 1 above. It is a normal operation for switches of switching converter to switch between non-conductive and conductive state, the limitation of claims 5 and 6 is not considered inventive.

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18. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai et al. (U.S. Patent 5,617,306) further in view of Brakus (U.S. Patent 5,631,816) as applied to claim 1 above, and further in view of Crooks (U.S. Patent 4,482,866).

Lai et al. and Brakus disclose the switch mode power supply with differential means except the differentiating means are implemented as a potential divider combination of a resistor and an associated inductor, the resistor and inductor.

Crooks teach the differential amplifiers (FIG 6, items 158 and 160) are implemented as a voltage divider (FIG 6, items 156; column 17, lines 49 – column 18, line 6) combination of a resistor (FIG 6, item 176) and an associated inductor (FIG 6, items 156).

Lai et al., Brakus, and Crooks disclose the invention except for an associated capacitor. It would have been an obvious matter of design choice to use either capacitor or inductor for filtering purpose, since applicant does not disclose that the capacitor solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with an inductor.

Lai et al., Brakus, and Crooks teach techniques related to switching power amplifier. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine techniques taught by Lai et al., Brakus, and Crooks for the purpose of increasing the efficiency of the switching power supply in producing faster load current rise time (Crooks, column 5, lines 52-60).

Allowable Subject Matter

19. No claim is allowed.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Erdman et al. (U.S. Patent 5,646,491), Yamashita et al. (U.S. Patent 5,726,869), Dobrenko (U.S. Patent 6,252,784), Nagasu et al. (U.S. Patent 6,304,472), and Zwicker (U.S. Patent 6,771,059).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily P. Pham whose telephone number is (571) 270-3046. The examiner can normally be reached on Mon-Thu (7:00AM - 6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272 - 2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

25. Regarding dependent claim 18:

26. Regarding dependent claim 19:

27. Regarding dependent claim 20:

Allowable Subject Matter

28. No claim is allowed.

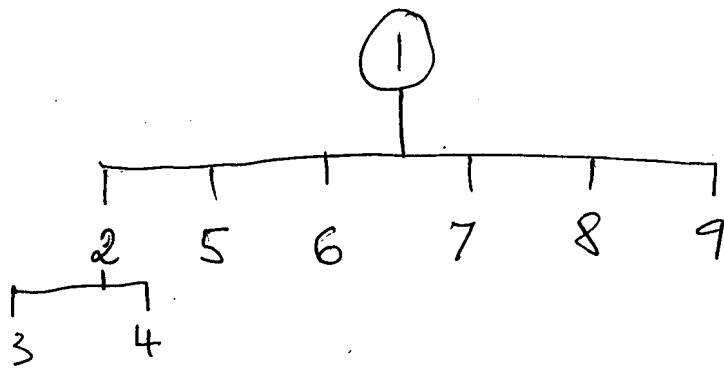
Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. ***.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily P. Pham whose telephone number is (571) 270-3046. The examiner can normally be reached on 4/10.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl D. Easthom can be reached on (571) 272 - 1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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